



IFW16

## RAW SEQUENCE LISTING

DATE: 08/05/2004

PATENT APPLICATION: US/09/765,061E

TIME: 10:18:50

Input Set : A:\96606-16UTL - SN 09765061 - Seq List.txt

Output Set: N:\CRF4\08052004\I765061E.raw

3 <110> APPLICANT: Board of Regents of the University of Texas System  
 5 <120> TITLE OF INVENTION: MUTATIONS IN A NOVEL PHOTORECEPTOR-PINEAL GENE ON 17P CAUSE

LEBER

6 CONGENITAL AMAUROSIS (LCA4)  
 8 <130> FILE REFERENCE: 96606/16UTL  
 10 <140> CURRENT APPLICATION NUMBER: 09/765,061E  
 11 <141> CURRENT FILING DATE: 2001-01-17  
 13 <150> PRIOR APPLICATION NUMBER: 60/331362  
 14 <151> PRIOR FILING DATE: 2001-01-14  
 16 <160> NUMBER OF SEQ ID NOS: 78  
 18 <170> SOFTWARE: PatentIn version 3.2  
 20 <210> SEQ ID NO: 1  
 21 <211> LENGTH: 6689  
 22 <212> TYPE: DNA  
 23 <213> ORGANISM: Homo sapiens  
 26 <220> FEATURE:  
 27 <221> NAME/KEY: gene  
 28 <222> LOCATION: (1)..(6689)  
 29 <223> OTHER INFORMATION: The AIPL1 gene produces the aryl-hydrocarbon receptor



interacting

30 protein-like 1  
 32 <220> FEATURE:  
 33 <221> NAME/KEY: misc\_feature  
 34 <222> LOCATION: (1897)..(1906)  
 35 <223> OTHER INFORMATION: n is a, c, g, or t  
 37 <220> FEATURE:  
 38 <221> NAME/KEY: misc\_feature  
 39 <222> LOCATION: (3946)..(3946)  
 40 <223> OTHER INFORMATION: n is a, c, g, or t  
 42 <400> SEQUENCE: 1  
 43 ggccctcccaa agtgctggat tacaggcgtg agtcaccgag cctgggtcccc tgtcttcttt 60  
 45 aagaaagctc agcggacett ttctcttctt ggggtggaac aaaaagccaa atctagcaca 120  
 47 accctgggca ggggccaga atcactggaa gcaaaggttg atgggatagg aggcgaggct 180  
 49 gcctgtggac cacaggcccg gcccgagtgg ctctgatgag aagccggggc gcctagggtca 240  
 51 ccgccccac cgtctgccct tcccccaact cctcctggct gggtaaatacc cagagtctca 300  
 53 gccgcctaag tgtcttcccc ggaggtgaga ttatctccgc ctgtgctgga cacctccett 360  
 55 tctcctgcag ccatggatgc cgctctgctc ctgaacgtgg aaggggtcaa gaaaaccatt 420  
 57 ctgcacgggg gcacggggca gctccaaac ttcatcaccg gatcccgagt gagtggggcc 480  
 59 cctccggagc agacagggtc ccccaacagca gctttcaaca ttccagggtg gcccgaaggc 540  
 61 actgtaaaca gctttcagct gtgccaaaaa aacagccagg cagccccagc gctgggcctc 600  
 63 cggggagctc ccagcgttta ccatttcagg gggcattttt ggtactttgc agattcaact 660  
 65 ttagcatggg ctgaggggaa gggcttttgg gaattttctg gggccctaaa tgttgagtga 720  
 67 gaagaaaggg agtccgagga gtcttggtat ttgtccccaa atgtctgtta ggcttcctg 780  
 69 gactgaaggg tgcgtctgtg gctacagaat tcgggctttg gccaggcgag gcggctcccc 840

71 .cctgtaatcc cagcactttg ggaggccaag atgggcagat catgagggtca agagttcgag 900

## RAW SEQUENCE LISTING

DATE: 08/05/2004

PATENT APPLICATION: US/09/765,061E

TIME: 10:18:50

Input Set : A:\96606-16UTL - SN 09765061 - Seq List.txt

Output Set: N:\CRF4\08052004\I765061E.raw

```

73 accagcctga ccaacatgtg aaaccccatc tctactgaaa atacaaaaat tagccagatg 960
75 tgctgtggcg cctgtaatcc cagttcagat actcaggaga cttgaggcag gagaatcact 1020
77 tgagcccagg aggtggaggt tgcagtgcgc cgagatcata ccactgcact ccaacctggg 1080
79 caacagagtg agactctgtc tcagaaaaaa aaaaaaaaaa aagaactcgg gcttacttga 1140
81 ggaaggatth ctggacgcac agggctgtgg ggaglggaat ggggtctgta gggaggggtg 1200
83 ggtccctcct ccctgggggg tgcaggcagg gtggaggtgc tccaggggtc tgaggcatct 1260
85 gatgggggtga actgagtgcg ctgaccctgg ggacagccct ggggtgcggg ggcaaggggg 1320
87 tggtctctgc cgggccttga acagtgtgtc tagagcagag tgcaccgtct cgggtgactag 1380
89 gtgatctttc atttccgcac catgaaatgt gatgaggagc ggacagtcac tgacgacagt 1440
91 cggcagggtg gccagcccat gcacatcatc atcggaacaa tgttcaagct cgaggctctg 1500
93 gagatcctgc ttacctccat gccgggtgcac gaggtggccg agttctgggt cgacaccatc 1560
95 gtaagtaggc cctgcgcgcc tgtctcctgg gactagtctt ttctgggctc acccaccgcg 1620
97 ttgccccggc tgctgtgttt cgggaaagct gggactcaag cgaagctttg caaagccagt 1680
99 cctgcaaaact tattccccac cgtgtgcatg tgaagatgga ggaacaaagg gctggaaggg 1740
101 gtgacccatg ctgtggctgg ctgggtggga gcagggtctat gaccagcagg agtgagctgg 1800
103 cccacttcac agtccctcac tctgtgtgtg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg 1860
-> 105 tgtgtgtgtg agagagagag agagagagag agagagagag nnnnnntagc cttaggactt 1920
107 attgcagaga ccaacaccta acaatgtaat caggcagcca gtgcaggaca taaataagta 1980
109 aggcagtgtg ctttgggcca caaaagcagc ctgagcttgc tggaaagccat ggggtgcgag 2040
111 ctgggggctg ctgagtcagg gccaaagggg gccctccctc gcagtaagct ggttctgggg 2100
113 cctctccctc ccttgggtcca gctcttaatc ccaacaggct caacagccat ctgcttgtct 2160
115 ctccataaaa gaggcagaag gcatttcggg ctaatcccg cgggtggggc gggcaggggtg 2220
117 acctctgtct ctgtgctggg gacctggagg cagagctgaa ctgctgcata gaggttcagc 2280
119 cctttcactt cacatgttgc atgtggggcc agtgcctggg catctcagaa gccgggtcca 2340
121 ggagatgggt tctcaggag cctagtggg gaaactgagg cccagcatac atacagcagg 2400
123 cctcgctgag gccgcacggc ggatcttccc agccctcctt catcccaagg gtggcaaaact 2460
125 cagctcccat gctggctgaa gctgtgatga gccagatcta tatctgcacc atctcattta 2520
127 atccctacag cagccctaata atcgaaacagg agcaaccag ggaactgagt ttcagagaag 2580
129 tgcagagacc tgggtctacc gctaacctgc agcactgcca ggacaccaa ggcactctct 2640
131 tggacctgg agtccctgct cttctactgc cccacactgc ccttccctgc agtcataggc 2700
133 ttgacagagg tcagggtttc cctggggcag agatgtgtta cagtggacca caagggccag 2760
135 aagaggcagc cggaggctaa cagcatatgg cctctggagc caggtttgaa tcttgggtgc 2820
137 gtcatttctc agctgtgtga ccttaagcaa gttgattgct tctctgggtc gtagtttccc 2880
139 catccgtaaa atgggataat agtgccctgc ttgaattgtc ataaggattg aaggggctca 2940
141 taacagtgtg aagtgtcttt cctggcacac agttaaccac agttagtatg agtggcatag 3000
143 tgaggagaca ggattccctc caggaggggc tctgagtgga ggcttttat ggcccaccta 3060
145 gctctgggca ggtagcctgg atgccatcca tccgtttatc cccacagcac acgggggtct 3120
147 accccatcct rtcccgagc ctgaggcaga tggcccagg caaggacccc acagagtggc 3180
149 acgtgcacac gtgcgggctg gccaacatgt tcgcctacca cacgtgggc tacgaggacc 3240
151 tggacgagct gcagaaggag cctcagcctc tggcttttgt gatcgagctg ctgcagggtg 3300
153 ggctgggggt ggcagggtcg gagggctgtg ccagcactgg agagggacag cgggcatcat 3360
155 gggcaccccc accccactgg ccactggaca gtgcctgtt tctgtttaga taatacgaga 3420
157 gggttcataa gccatgggag aatacgaatt tgaaaaaaa gtccctctgat tttccacaa 3480
159 gaaaagtcc ttggtgctgg gcatgggtgc ccacgcctgt aatccatagca ctttgggagg 3540
161 ccgagggggt tggatcacct gaggtcagga gttcgaagac cagcctggcc aacatggtaa 3600
163 aacccgtct ctattaaaaa caaaaaatt aaccgggtgt ggtggtgcat gcctgtaatc 3660
165 aatcccagct acttgggaat ttgaggcatg agaattgctt gaacctggaa gtggagggtg 3720
167 cagtgcagc agatcatgtc agtgcatttt aacctgggtg acagagtgc actccatgtc 3780
169 caaaaaaaag aaaaaaaaaa aaagtcact tggaaaccagt ttttaaaaat gtgattcatt 3840

```

## RAW SEQUENCE LISTING

DATE: 08/05/2004

PATENT APPLICATION: US/09/765,061E

TIME: 10:18:50

Input Set : A:\96606-16UTL - SN 09765061 - Seq List.txt

Output Set : N:\CRF4\08052004\I765061E.raw

```

171 ttcattgttg aggcaatttta tccacttcca ctttcatttt caggagttagg agattataac 3900
W--> 173 cgctccttg gttcctgtgg tttgtgggtt cagacttggt tctctnngtg cgggagaggg 3960
175 tgcattggaac tccccacatc ctcccaacca ggagccccag agtgattggc agcgcgtggt 4020
177 tgtggattgg tgagagaggg ttaggggccag ggtcaaggctc aggtcaggac tcagcttatg 4080
179 gccaaagactg aggtcagacc tgagagctat gtgggtgaat aaaataaaat aagaactgtg 4140
181 tcaaccaagg gccctttaca ggcttgctgt cacagttagt tggtctgtgc actgcacaag 4200
183 gtgcaccggc atctctcca aggtgctcat tatagacatt gtatattggt atttccataa 4260
185 tgagaagttt ccagcagatg gcaatagtgt attgttctaa caaacagagt attcgtgaca 4320
187 attttctgaa tattagaagt gaagtgtctt gatgaacggg cacttttcc tagtttgcac 4380
189 aaagacattg atttagggca ggggttttcg cgttggtgct tctttccctt gtctgtatgc 4440
191 acttgaccag caagcatgac ttcagggaga tgtgccacag ggtcctggtt ttcgggtctc 4500
193 tgatgggggtg cagggccctg gggctccctgc ctactgacc tgcagctctg gggccagggt 4560
195 gatgccccga gtgattacca gagggagacc tggaaacctg gcaatcatga gaagatgaag 4620
197 gcggtgcccg tctccacgg agagggaat cggctcttca agctggggccg ctacgaggag 4680
199 gcctcttcca agtaccagga ggccatcatc tgcctaagga acctgcagac caaggtcaga 4740
201 ggccgctggc caggggtggg aagtggcgct gactctgggg ggctgcccc gtgccggcca 4800
203 ggggtggggcg ggggttgggc agctgcctga ggtcatggct gaccttctcc ctgggcagga 4860
205 gaagccatgg gaggtgcagt ggctgaagct ggagaagatg atcaatactc tgatcctcaa 4920
207 ctactgccag tgcctgctga agaaggagga gtactatgag gtgctggagc acaccagtga 4980
209 tattctccgg caccaccag gtgcgcgggg ctgcaggggc ggacagttag ggggcgcccc 5040
211 gccagggcc acggagacac ctgccatagc ctctctggac ttttctttcc accccaccag 5100
213 ggcaccaaac cttgtctcca ccagccggg tttccccgag tgtgtaactg aattgtgggt 5160
215 gatggatggg cagtgtctgg cgcggggcgg cctttatttt aatgtgtggt tgaacactta 5220
217 ccaggaagc tcgccaagct tgtgatttca gcggaacggt aaacaggcgt ttaaaaagag 5280
219 gggcaatcaa tatagggaaa aatattatga tgcggtact agtactggtg ttgcgaggat 5340
221 atggcacccg agtactagat tgacttaatg ctgcaatcgt gctcacagta aaaacatcca 5400
223 gcccctggct catgcatcag gcacacgtcg tctgcgttta ttatctcatt taatcctcat 5460
225 aatcctcata atcaccatat gagggagggt cagggaaagg ggctgaagg ttatctaatt 5520
227 taggtagegt ctataagaaa aataaaacaa agttatgaat ataaaattac tcacagggcc 5580
229 ttaaaaagga gagggaggag tactgctatt atgatcatca tctccatctt acagttgagg 5640
231 aaaccgagg atgggggata cagagaggtt aaggatcatg gcggggctga gggctctgga 5700
233 ggctgggtgag tcccagctgg gctggggctg cctctgaggc tgggaaggga gctgtagctg 5760
235 gatgctccct gctcccaca ggcacgctga aggcctacta cgtgcgtgcc cgggctcacg 5820
237 cagagggtgtg gaatgaggcc gagggcaagg cggacctcca gaaagtgtct gagctggagc 5880
239 cgtccatgca gaaggcgggt cgcagggagc ttgaggctgc tggagaaccg catggcggag 5940
241 aacaggagga ggagcggctg cgtgcggga acatgctgag ccagggtgcc acgcagcctc 6000
243 ccgcagagcc acccacagag ccaccgcac agtcatccac agagccacct gcagagccac 6060
245 ccacagcacc atctgcagag ctgtccgcag ggccccctgc agagccagcc acagagccac 6120
247 ccccgctccc agggcactcg ctgcagcact gagccccctg agggccacag ccaccaggc 6180
249 agggagcaag tggcctggtc acttctggtt cgattgacca ggatcgtggt gtcacttttt 6240
251 aaaatttaaa attaatTTTT gaaatcaaag tcagacacac ccatggtaaa aaaaaaaaaa 6300
253 aaaacaatcc caagggtaca gaagagctta tgaataaaag tagttttctc ctctaccct 6360
255 ctcatctctt ccgtgccatg gttttaattg accctgtttt taattctctt ggtagttttc 6420
257 tctattttcca agtaatctgt ttaaactcagt ttctagattt taccctatgt caatgacaaa 6480
259 tgaggatttg atgctctgat ctttctcat gcctgatacc cctccctgtc tccccatttt 6540
261 ggatagttac atttgggggt catctcggtg atttttgtaa ctttaacgcag gacacttaga 6600
263 gctctctaga atcccactga ctttagtggt gtcttgatgt aggggtggga agccccgaca 6660
265 ctggagctta gctgagagg ggttcttgc 6689
268 <210> SEQ ID NO: 2

```

## RAW SEQUENCE LISTING

DATE: 08/05/2004

PATENT APPLICATION: US/09/765,061E

TIME: 10:18:50

Input Set : A:\96606-16UTL - SN 09765061 - Seq List.txt

Output Set: N:\CRF4\08052004\I765061E.raw

269 &lt;211&gt; LENGTH: 1119

270 &lt;212&gt; TYPE: DNA

271 &lt;213&gt; ORGANISM: Papio anubis

274 &lt;220&gt; FEATURE:

275 &lt;221&gt; NAME/KEY: gene

276 &lt;222&gt; LOCATION: (1)..(1119)

277 &lt;223&gt; OTHER INFORMATION: The AIPL1 gene produces the aryl-hydrocarbon receptor interacting

278 protein-like 1

280 &lt;400&gt; SEQUENCE: 2

```

281 atggatgccg ctctgctcct gaacgtggaa ggggtcaaga aaaccattct gcacggaggc      60
283 acgggcgagc tcccaaactt catcaccgga tcccgagtga tctttcattt ccgcaccatg      120
285 aaatgtgatg aggagcgcac ggatcatcgac gacagccggc aggtggacca gcccatgcac      180
287 atcatcatcg ggaacatggt caagctcgag gtctgggaga tcttgcctac ctccatgagg      240
289 gtgcacgagg tggccgagtt ctggtgcgac accatccaca cgggggtcta ccccatcctg      300
291 tcccggagcc tgcggcagat ggcccagggc aaggacccca cggagtggca cgtgcacaca      360
293 tgcgggctgg ccaacatggt cgctaccac acactgggct acgaggacct ggacgagctg      420
295 cagaaggagc ctgagcctct gatctttgtg atcgagctgc tgcaggttga cgccccgagt      480
297 gattaccaga gggagacctg gaacctgagc aatcatgaga agatgaaggc ggtgcccgct      540
299 ctccacggag agggaaatcg gctcttcaag ctgggccgct acgaggaggc ctcttccaag      600
301 taccaggagg ccatcatctg cctaaggaac ctgcagacca aggagaagcc atgggaggtg      660
303 cagtggctga agctggagaa gatgatcaac accctgacct tcaactactg ccagtgcctg      720
305 ctgaagaagg aggagtatta cgaggtgctg gagcacacca gtgacattct ccggcaccac      780
307 ccaggcatcg tgaaggccta ctatgtgcgt gcccgggctc acgcagaggt gtggaatgag      840
309 gccgaggcca aggcggacct ccagaaagtg ctggagctgg agccatccat gcagaaggcg      900
311 gtgcgcaggg agctgaggct gctggagaac cgcattggcag agaagcagga ggaggagcgg      960
313 ctgcgctgcc ggaacatgct gagccaggga gccacgcagc ctcccacaga gccaccggca     1020
315 gagccccaca cagcaccacc tgcggagctg tccacagggc cacctgcaga gccaccgcga     1080
317 gagctcccc tgtccccagg gcactcactg cagcactga                               1119

```

320 &lt;210&gt; SEQ ID NO: 3

321 &lt;211&gt; LENGTH: 1155

322 &lt;212&gt; TYPE: DNA

323 &lt;213&gt; ORGANISM: Pan troglodytes

326 &lt;220&gt; FEATURE:

327 &lt;221&gt; NAME/KEY: gene

328 &lt;222&gt; LOCATION: (1)..(1155)

329 &lt;223&gt; OTHER INFORMATION: The AIPL1 gene produces the aryl-hydrocarbon receptor interacting

330 protein-like 1

332 &lt;400&gt; SEQUENCE: 3

```

333 atggatgccg ctctgctcct gaacgtggaa ggggtcaaga aaaccattct gcacgggggc      60
335 acgggcgagc tcccaaactt catcaccgga tcccgagtga tctttcattt ccgcaccatg      120
337 aaatgtgatg aggagcggac agtcattgac gacagccggc aggtgggcca gcccatgcac      180
339 atcatcatcg gaaacatggt caagctcgag gtctgggaga tcttgcctac ctccatgcgg      240
341 gtgcacgagg tggccgagtt ctggtgcgac accatccaca caggggtcta ccccatcctg      300
343 tcccggagcc tgaggcagat ggcccagggc aaggacccca cagagtggca cgtgcacaca      360
345 tgcgggctgg ccaacatggt cgctaccac acgctgggct acgaggacct ggacgagctg      420
347 cagaaggagc ctgagcctct ggtctttgtg atcgagctgc tgcaggttga tgccccgagt      480
349 gattaccaga gggagacctg gaacctgagc aatcatgaga agatgaaggc ggtgcccgct      540
351 ctccacggcg agggaaatcg gctcttcaag ctgggacgct acgaggaggc ctcttccaag      600
353 taccaggagg ccatcatctg cctaaggaac ctgcagacca aggagaagcc gtgggaggtg      660

```

## RAW SEQUENCE LISTING

DATE: 08/05/2004

PATENT APPLICATION: US/09/765,061E

TIME: 10:18:50

Input Set : A:\96606-16UTL - SN 09765061 - Seq List.txt

Output Set: N:\CRF4\08052004\I765061E.raw

```

355 cagtggctga agctggagaa gatgatcaat actctgatcc tcaactactg ccagtgcctg      720
357 ctgaagaagg aggagtacta tgaggtgctg gagcacacca gcgacattct ccggcaccac      780
359 ccaggcatcg tgaaggccta ctacgtgcgt gcccgggctc acgcagaggt gtggaatgag      840
361 gccgaggcca aggcagacct ccggaaagtg ctggagctgg agccgtccat gcagaaggcg      900
363 gtgcgcaggg agctgaggct gctggagaac cgcattggcg agaagcagga ggaggagcgg      960
365 ctgcgctgcc ggaacatgct gagccagggt gccacgcagc ctccggcaga gccaccacaca    1020
367 gagccacccg cacagtcata cacagagcca cctgcagagc cacccccagc accatctgca    1080
369 gagctgtccg cagggccacc tgcagagaca gccacagagc cacccccgtc cccagggcac    1140
371 tcgctgcagc actga                                     1155

```

374 &lt;210&gt; SEQ ID NO: 4

375 &lt;211&gt; LENGTH: 1060

376 &lt;212&gt; TYPE: DNA

377 &lt;213&gt; ORGANISM: Bos taurus

380 &lt;220&gt; FEATURE:

381 &lt;221&gt; NAME/KEY: gene

382 &lt;222&gt; LOCATION: (1)..(1060)

383 <223> OTHER INFORMATION: The AIPL1 gene produces the aryl-hydrocarbon receptor  
interacting

384 protein-like 1

386 &lt;400&gt; SEQUENCE: 4

```

387 atggatgcca ctctgtcct gaatgtggaa gggatcaaga aaaccattct gcatggggggc      60
389 acaggggacc tccccactt cattactgga gcccagatga cctttcattt ccgaaccatg    120
391 aaatgtgatg aggagcggac ggtgatagac gacagcaagc aggtgggcca tcccatgcac    180
393 atcatcattg ggaacatggt caagctggag gtctgggaga tcttgctgac gtccatgcgg    240
395 gtcagcgagg tggccgagtt ttggtgcgac accatccaca caggggtcta ccccatcctg    300
397 tcccggagcc tgcggcagat ggcggagggt aaggaccca cagagtggca cgtgcacacg    360
399 tgtggcttgg ccaacatggt cgcttaccac acgctgggct acgaggacct ggacgagctg    420
401 cagaaggagc ctgagccact gatcttcata atcgagttgc tgcaggtcga ggccccgagc    480
403 cagtaccaga gggagacctg gaacctgaat aaccaggaga agatgcaggc ggtgcccata    540
405 ctccatggag aaggaaaccg gctcttcaag ctgggccgct acgaggaggc ctccaacaag    600
407 taccaggaag ccacgtctct cctgaggaac ctgcagacca aggagaaacc ctgggaggtg    660
409 cagtggctga agctggagaa gatgatcaac accctgatcc tgaactactg tcagtgtctg    720
411 ctgaagaagg aggtactact cgaggtgctg gaacacacta gtgacatcct ccggcatcac    780
413 ccaggcatcg tgaaggccta ctatgtgagg gcccgggctc acgcccaggt gtggaatgag    840
415 gcggaagcca aggcggatct ggagaaagtg ctggagctgg agccgtccat gcggaaggcg    900
417 gtgcagaggg agctgaggct gctggagaac cggctggagg agaaacgcga ggaggagcga    960
419 ctgcgctgcc ggaacatgct gggctagtgc gcaggcgcca agcctcctgc ctccgcccc    1020
421 cgcycctcca ccccccccaa aaaaaaaaaa aaaaattttt                                     1060

```

424 &lt;210&gt; SEQ ID NO: 5

425 &lt;211&gt; LENGTH: 925

426 &lt;212&gt; TYPE: DNA

427 &lt;213&gt; ORGANISM: Canis familiaris

430 &lt;220&gt; FEATURE:

431 &lt;221&gt; NAME/KEY: gene

432 &lt;222&gt; LOCATION: (1)..(925)

433 <223> OTHER INFORMATION: The AIPL1 gene produces the aryl-hydrocarbon receptor  
interacting

434 protein-like 1

436 &lt;400&gt; SEQUENCE: 5

```

437 tgtacggggg caccggcgag ctcccaaact tcctcacggg gtcccgggtc atctttcact      60
439 tccgcacaac gaaatgcgac gaggcgcgga cagtgatcga cgacagcaag cgtgtggggc    120

```

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 08/05/2004  
PATENT APPLICATION: US/09/765,061E      TIME: 10:18:51

Input Set : A:\96606-16UTL - SN 09765061 - Seq List.txt  
Output Set: N:\CRF4\08052004\I765061E.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 1897,1898,1899,1900,1901,1902,1903,1904,1905,1906,3946  
Seq#:52; Xaa Pos. 1  
Seq#:72; Xaa Pos. 322

## VERIFICATION SUMMARY

DATE: 08/05/2004

PATENT APPLICATION: US/09/765,061E

TIME: 10:18:51

Input Set : A:\96606-16UTL - SN 09765061 - Seq List.txt

Output Set: N:\CRF4\08052004\I765061E.raw

L:105 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1860  
L:173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:3900  
L:1128 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:42  
L:1143 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:43  
L:1158 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:44  
L:1182 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:46  
L:1197 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:47  
L:1212 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:48  
L:1227 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:49  
L:1285 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:35  
L:1422 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:60  
L:1437 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:61  
L:1452 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:62  
L:1467 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:63  
L:1482 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:64  
L:1497 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:65  
L:1512 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:66  
L:1527 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:67  
L:1542 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:68  
L:1557 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:69  
L:1572 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:70  
L:1587 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:71  
L:1693 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:320